

## REMARKS

### *Interview Summary*

The Applicant's undersigned representative and Examiner Hsu held a telephonic interview on March 26, 2007. The Applicant's undersigned representative believes that the Examiner's *Interview Summary* mailed March 28, 2007 constitutes an accurate record of that interview. In light of the amendments presented herein (and the Examiner's previous representations) the Applicant's undersigned representative is of the opinion that the present application is allowable over the Artieri reference as further discussed below.

### *Amendment to the Claims*

The present amendment more clearly states the presently claimed invention. No new matter is introduced through these amendments.

### *Status of the Claims and General Summary of Claim Rejections*

Claims 1-41 are pending in the present application. Claims 1-6, 14-17, 19-32 and 34-41 have been rejected under 35 U.S.C. § 102 (b) as being anticipated by Artieri, U.S. Patent No. 5,579,052. See *Final Office Action*, 4-15. Claims 7, 9, 10, 11 and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Artieri in view of McGuinness, U.S. Patent No. 6,104,416. See *Final Office Action*, 15-20. Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Artieri in view of Sorin, U.S. Patent No. 6,631,164. See *Final Office Action*, 20-21. Claims 12, 13 and 33 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Artieri in view of Levy, U.S. Patent No. 5,170,251. See *Final Office Action*, 21-22. The Applicant respectfully traverses all rejections herein.

As a preliminary matter, Applicants respectfully submit that the *Final Office Action* is not fully responsive to the arguments contained in Applicant's Response of November 7, 2006 (*Response*). While the Examiner states that the arguments contained in the *Response* "have been fully considered but they are not persuasive," *Final Office Action*, 2, there is no discussion of those arguments or the portions of the reference cited by Applicant. The Examiner merely recites one paragraph from the *Response* verbatim, states that "[i]n reply, the Examiner disagrees," and then recites a single paragraph from the Office Action of August 10, 2006, which contains only the Examiner's assertion that the reference anticipates claim 1. *Final Office Action*, 2-3. The remaining 22 pages of the *Final Office Action* appear to be a verbatim copy of the prior office action. The Applicant respectfully contended that it is entitled to a proper response to his arguments, and to those contained herein.

**35 U.S.C. § 102(b) Rejection per Artieri**

The Examiner has rejected Claims 1-6, 14-17, 19-32 and 34-41 under 35 U.S.C. § 102 (b) as being anticipated by Artieri. See *Final Office Action*, 4-15. The Applicant respectfully traverses this rejection.

The Applicant respectfully submits that Artieri does not anticipate claim 1 as previously presented, or as currently amended. Claim 1 now reads as follows:

A method for generating memory requests to fetch read data from a plurality of locations in a memory, the memory comprising a plurality of memory pages, each of the memory pages having a plurality of words, the method comprising the steps of:

- determining the locations of the read data in the memory;
- selecting a packetization scheme based on the locations of the read data;
- assembling at least one read command for addressing the plurality of locations of the read data; and
- fetching the read data from the memory locations and *combining it into a plurality of data packets* in accordance with the selected packetization scheme, wherein at least one data packet contains data fetched from each of a plurality of memory pages.

The Examiner continues to ignore the emphasized language, which indicates that the data to be fetched is located in a plurality of locations in the memory, and that it is retrieved from these locations and then *combined* into a plurality of data packets in accordance with a *packetization scheme based upon the locations of the data*. Artieri has nothing to do with how the data is packetized or with selecting a packetization scheme based upon the locations of the data in memory. Further, Applicant has added the limitation that *at least one data packet contains data fetched from each of a plurality of memory pages*. Artieri teaches away from this claim element as is discussed below.

As argued in the *Response*, Artieri is limited to retrieving the data in the same form, or packets, as the data is stored. Artieri repeatedly refers to "a system that processes compressed data arriving in packets." See, e.g., Abstract; also col. 3:34-35, and Claim 1, col.21:46-47. These packets, which correspond to picture blocks, col. 3:36, are of *fixed size*. For example, it is stated that "the size of the FIFOs [buffer memories] is two packets of data . . . the task continues (the signal ACKVID remains active) as long as a full packet, of *predetermined size* exploitable by the display controller 18, has not been

transferred." Col. 9:46-65 (emphasis added). Similarly, later it is said that "[e]ach packet contains a *fixed number of data* equal, for example, to half the size of the FIFO." Col. 16:31-33. Thus, the size of a packet is a fixed quantity, and there is no packetization based upon the location of the data in memory.

The Examiner continues to cite a portion of Artieri as teaching the elements of claim 1:

Artieri discloses . . . the steps of determining the locations of the read data in the memory; selecting a packetization scheme based on the locations of the read data; assembling at least one read command for addressing the plurality of locations of the read data; and fetching the read data from the memory locations and combining it into a plurality of data packets in accordance with the selected packetization scheme (*determine the position in the picture memory from which packets of data must be transferred, read instruction, modification may consist in an incrementation (which amounts to write or to read data at successive addresses in the picture memory) or in a more complex calculation (for example a recursive calculation to extract a picture line from a sequence of macro-blocks, Col. 16, lines 33-47*

*Final Office Action*, 4-5 (italics in original; emphasis added).

This is a mischaracterization of Artieri. The portion of Artieri cited by the Examiner *actually* states:

In order to determine the position in the picture memory from which packets of data must be transferred, it is possible, for example, to update a data pointer stored in the picture memory. The instruction processor includes an address register AR containing the *address at which a transfer (read or write) operation is carried out*. The beginning of a transfer program of a packet of data includes an instruction that writes in this address register AR the content of the data pointer. The subsequent instructions of the program are, for example, instructions to adequately *modify the content of the address register at each read or write instruction*. This adequate modification may consist in an incrementation (which amounts to write or to read data at successive addresses in the picture memory) or in a more complex calculation (for example a recursive calculation to extract a picture line from a sequence of macro-blocks).

Artieri, 16:32-47 (emphasis added).

The Applicant continues to question the correlation between this citation and the Examiner's corresponding interpretation of Artieri above. Nowhere does this language in any way suggest the underlined language from claim 1—selecting a packetization scheme based on the locations of the read data, and combining the data into data packets with the selected packetization scheme. Rather, Artieri only concerns the *order* in which the packets are read from memory, and indicates that they need not be read in the *same sequence* in which they are stored. This has nothing to do with how the packets are *created*. Since the data is arriving already assembled into packets of fixed size, Artieri does not teach or suggest selecting a packetization scheme that might vary with the location of the data or assembling, or combining the data into, the packets.

Nowhere does Artieri teach or suggest retrieving the data in any other fashion other than in packets of fixed size; rather, Artieri is limited to storing and reading the data in the same packetized form as it is stored (if not in the same order of packets), and no other method of retrieving the data is disclosed. Thus, Artieri does not anticipate claim 1.

Further evidence of this is provided by a comparison of dependent claim 7 to Artieri.

Claim 7 provides:

The method of claim 4 wherein the step of selecting a packetization scheme further comprises *combining a part of the luminance chunk and a part of the chrominance chunk into one of the plurality of data packets to be sent from the memory when the luminance chunk overlaps more than one of the plurality of memory pages.*

Claims 8 and 9 similarly claim combining first and second parts of the luminance and chrominance chunks respectively when those chunks overlap more than one page.

Artieri teaches away from this:

A commonly used picture memory is a dynamic memory (DRAM). The advantage of DRAMs is that they are small-sized, inexpensive, and have a large storing capacity. However, DRAMs are accessed in two steps. Indeed, a DRAM is partitioned into several pages. Before reading or writing in a DRAM, a page must be selected by a specific addressing cycle; then a word must be selected in this page by a normal read or write cycle. Of course, once a page is selected, the words of this page are all accessible by normal read or write cycles.

To optimize the use of a DRAM, the luminance blocks of the macro-blocks are stored in a first page, and the chrominance blocks are stored in another page. *The chrominance blocks are thus separated from the luminance blocks so as to store a whole number of blocks in a DRAM page.* Suitable functions of the processing unit manage the separation and grouping of the blocks during transfers of macro-blocks.

Col. 18:21-37 (emphasis added). If a whole number of blocks is stored on a page, there is no block that overlaps multiple pages. Further, since the blocks are stored on separate pages, chrominance data is not contained in a packet with luminance data as in claim 7.

As a matter of law, any dependent claim that depends from an allowable independent claim cannot be obvious and/or anticipated in and of itself. See 35 U.S.C. § 112, ¶ 4. Since the Applicant has evidenced the allowability of independent base claim 1, the Applicant contends that dependent claims 2-6 and 14-17 of the present application are also allowable.

Independent claims 19, 21, and 24-28 similarly indicate that the data is packed into data packets based upon instructions received including the location of the data to be read or that data is unpacked from data packets and reassembled into usable chunks based upon the packetization scheme used to create the packets, and that (with the exception of claim 21) at least one packet contains data from multiple pages.

Specifically with respect to claim 19, Artieri fails to show packing the read data into data packets according to the specifications of a read command but rather only shows that a data packet may have a header containing decoding parameters. Artieri, 3:36-38. There is no connection shown between the packetization scheme and the read command.

Claim 21 recites a method for reassembling reference pixel data from a plurality of data packets into a luminance chunk and a chrominance chunk by, in part, determining the packetization scheme used to packetize the chunks into the data packets, and that the packetization scheme is determined by the location in memory of the data to be reassembled. As above, Artieri does not show the use of different packetization schemes based upon memory location.

Claims 24 and 25 are claims for a computer readable medium, and as such are allowable if the method contained in the program on the medium is allowable.

Claim 26 and 27 are system claims written in means for language and are similar to claims 1 and 19. Claims 26 and 27 are thus allowable for the same reasons.

Claim 28 recites a system for decoding pictures which again includes packing the data into packets according to specifications of the memory read commands. As above, this claimed aspect is not shown in Artieri. As with claim 1, the portion of Artieri cited by the Examiner fails to show any connection whatsoever between the memory read commands or the location of the data and the packetization scheme.

Accordingly, claims 19, 21 and 24-28 are not anticipated by Artieri. Since these claims are not anticipated, dependent claims 20, 22-23 and 29-41 are also allowable. The Applicants thus respectfully request the rejection of claims 1-6, 14-17, 19-32 and 34-41 as anticipated by Artieri under 35 U.S.C. § 102(b) be withdrawn.

**35 U.S.C. § 103(a) Rejections per Artieri in view of McGuinness**

The Examiner has rejected claims 7, 9, 10-11 and 18 pursuant to 35 U.S.C. § 103(a) as being unpatentable over Artieri in view of McGuinness. *Final Office Action*, 16-19. All of these claims depend from claim 1. As a matter of law, any dependent claim that depends from an allowable independent claim cannot be obvious and/or anticipated in and of itself. See 35 U.S.C. § 112, ¶ 4. Since the Applicant has evidenced the allowability of independent base claim 1, the Applicant contends that dependent claims 7, 9, 10-11 and 18 of the present application are also allowable. The Applicants thus respectfully request the rejection of claims 7, 9, 10-11 and 18 as being unpatentable over Artieri in view of McGuinness under 35 U.S.C. § 103 be withdrawn.

**35 U.S.C. § 103(a) Rejections per Artieri in view of Sorin**

The Examiner has rejected claim 8 pursuant to 35 U.S.C. § 103(a) as being unpatentable over Artieri in view of Sorin. *Office Action*, 20. Claim 8 depends from claim 1. As a matter of law, any dependent claim that depends from an allowable independent claim cannot be obvious and/or anticipated in and of itself. See 35 U.S.C. § 112, ¶ 4. Since the Applicant has evidenced the allowability of independent base claim 1, the Applicant contends that dependent claims 7, 9, 10-11 and 18 of the present application are also allowable. The Applicants thus respectfully request the rejection of 8 as being unpatentable over Artieri in view of Sorin pursuant to 35 U.S.C. § 103(a) be withdrawn.

**35 U.S.C. § 103(a) Rejections per Artieri in view of Levy**

The Examiner has rejected claims 12, 13 and 33 pursuant to 35 U.S.C. § 103(a) as being unpatentable over Artieri in view of Levy. *Office Action*, 21. Claims 12 and 13 depend from claim 1. Claim 33 depends from claim 28. As a matter of law, any dependent claim that depends from an allowable independent claim cannot be obvious and/or anticipated



in and of itself. See 35 U.S.C. § 112, ¶ 4. Since the Applicant has evidenced the allowability of independent base claims 1 and 28, the Applicant contends that dependent claims 7, 9, 10-11 and 18 of the present application are also allowable. The Applicants thus respectfully request the rejection of claims 12, 13 and 28 as being unpatentable over Artieri in view of Levy pursuant to 35 U.S.C. § 103(a) be withdrawn.

### CONCLUSION

The Applicants contend that the Examiner's 35 U.S.C. § 102(b) rejection is overcome by Artieri's failure to disclose all of the elements of independent claims 1, 19, 21 and 24-28. For example, Artieri fails to disclose data to be fetched being located in a plurality of locations in the memory, and that that data is retrieved from these locations and then combined into a plurality of data packets in accordance with a packetization scheme based upon the locations of the data. The Examiner's 35 U.S.C. § 103 rejections are overcome for at least the same reasons. That is, all dependent claims of the present application are allowable by virtue of their dependence on (either directly or via an intermediate dependent claim) an allowable base claim.

While the Applicant believes a *Notice of Allowance* is now warranted, the Examiner is invited to contact the Applicant's undersigned representative with any questions concerning the present application.

Respectfully submitted,  
Derek B. Noonburg

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